

IN THE CLAIMS:

1. (Currently Amended) A surgery system comprising:
a plurality of types of medical devices to which a plurality of types of treatment equipment are connected, the plurality of types of medical devices generating and outputting treatment equipment driving signals corresponding to the connected treatment equipment;

driving switches provided to the plurality of types of medical devices;
communicating means provided between the plurality of types of medical devices, for communicating information one with another;

driving control information transmission means provided to each of the plurality of types of medical devices, for generating driving control information corresponding to the treatment equipment connected to its own medical device, and transmitting the driving control information to other medical devices via the communication means;

control information determination reply means provided to each of the plurality of types of medical devices, for receiving driving control information transmitted from other medical devices and making permission/non-permission determination regarding whether or not operations can be made in synchronization with other medical devices, based on the driving control information, and also making reply of the permission/non-permission determination to the originating medical device via the communication means; and

driving control decision means provided to each of the plurality of types of medical devices, for deciding the driving control of the medical device to which it belongs, based on the synchronization driving permission/non-permission determination reply from the control information determination reply means of another medical device[[.]],

wherein the plurality of types of medical devices perform communication with one another in response to activation of the driving switches, and it is determined whether or not each type of treatment equipment connected to each medical device can operate in synchronization.

2. (Original) A surgery system according to Claim 1, wherein in the event of the driving control information transmission means performing driving control of treatment equipment not necessitating synchronized operations with other medical devices, the driving control information transmission means performs inclusion transmission of synchronized operations unnecessary information at another medical device, and wherein the other medical device which has received the synchronized operations unnecessary information performs non-permission settings for synchronized operations.

3. (Currently Amended) A surgery system according to Claim 1, wherein the driving control information transmission means transmits driving control information to other medical devices via the communication means at constant intervals, and in the event that the driving control information transmitted from the driving control information transmission means of the originating medical device at constant intervals is not received within a stipulated time period, the control information determination reply means of the other medical device stops driving control of its own medical device.

4. (Original) A surgery system according to Claim 3, wherein the driving control information is switch data indicating that an operating switch connected to the originating medical device has been switched on or off.

5. (Currently Amended) A surgery system comprising:

means for mutually connecting a plurality of types of medical devices via communication cables;

driving switches provided to the plurality of types of medical devices;

means for transmitting switch data of one originating medical device to other medical devices;

means for receiving switch data at other medical devices;

means for distinguishing permission or non-permission of switch data of the originating medical device received by another medical device, and making a reply to the originating medical device to that effect; and

means for the originator to decide control of its own device, based on the reply data[[]].

wherein the plurality of types of medical devices perform communication with one another in response to activation of the driving switches, and it is determined whether or not each type of treatment equipment connected to each medical device can operate in synchronization.

6. (Currently Amended) A surgery system comprising:

means for mutually connecting a plurality of types of medical devices via communication cables;

driving switches provided to the plurality of types of medical devices;

means for distinguishing the types of the plurality of types of treatment equipment connected to the plurality of types of medical devices, and deciding the driving control of each medical device; and

means for deciding permission/non-permission of switch processing for each medical device, based on the decision data[[]].

wherein the plurality of types of medical devices perform communication with one another in response to activation of the driving switches, and it is determined whether or not each type of treatment equipment connected to each medical device can operate in synchronization.

7. (Original) A surgery system according to Claim 6, wherein the means for deciding permission/non-permission of switch processing are means for forbidding a particular switch while a particular piece of treatment equipment is performing output.

8. (Original) A surgery system according to Claim 1, wherein the plurality of types of medical devices include:

an electric scalpel device for supplying high-frequency electric current to treatment equipment;

an ultrasonic output device for supplying ultrasonic driving signals to the treatment equipment;

a water-supply/suction device for supplying cleaning water and the like to the treatment equipment and suctioning water therefrom; and

a pneumoperitoneum device for supplying air to the treatment equipment and venting air therefrom.

9. (Currently Amended) A surgery system according to Claim 8, the electric scalpel device comprising:

output means for generating and outputting high-frequency electric current corresponding to the treatment equipment connected thereto;

treatment equipment determining means for determining the connection and type of treatment equipment connected;

switch detection means for detecting an operating switch for the connected treatment equipment being switched on;

control means for performing driving control of the output means based on the determination results of the connection and type of the treatment equipment made by the treatment equipment determining means, and

~~detection of a switch being switched on by the switch detection means; and~~

communication means for sending driving control information of the electric scalpel device and synchronized driving information with the electric scalpel device to other medical devices, and also receiving driving control information and synchronized driving information from other medical devices, under the control of the control means.

10. (Original) A surgery system according to Claim 8, the ultrasonic output device comprising:

output means for outputting ultrasonic driving signals corresponding to the treatment equipment connected thereto;

treatment equipment determining means for determining the connection and type of treatment equipment connected;

switch detection means for detecting an operating switch for the connected treatment equipment being switched on;

control means for performing driving control of the output means based on the determination results of the connection and type of the treatment equipment made by the treatment equipment determining means, and

detection of a switch being switched on by the switch detection means; and

communication means for sending driving control information of the ultrasonic output device and synchronized driving information with the ultrasonic output device to other medical devices, and also receiving driving control information and synchronized driving information from other medical devices, under the control of the control means.

11. (Original) A surgery system according to Claim 8, the water-supply/suction device comprising:

a water supply pump and a suction pump;

switch detection means for detecting a switch for instructing driving action of the water supply pump and suction pump being switched on;

control means for performing driving control of the water supply pump and suction pump based on the driving instructions of the water supply pump and suction pump detected by the switch detection means; and

communication means for sending driving control information of the water-supply/suction device to other medical devices, and also receiving driving control information and synchronized driving information from other medical devices, under the control of the control means.

12. (Original) A surgery system according to Claim 8, the pneumoperitoneum device comprising:

an air supply pump and an air vent pump;

switch detection means for detecting a switch for instructing driving action of the air supply pump and vent pump being switched on;

control means for performing driving control of the air supply pump and vent pump based on the driving instructions of the air supply pump and vent pump detected by the switch detection means; and

communication means for sending driving control information of the pneumoperitoneum device to other medical devices, and also receiving driving control information and synchronized driving information from other medical devices, under the control of the control means.

13. (New) A surgery system comprising:

a first medical device to which a type of treatment equipment selected from a plurality of types of treatment equipment is connected, the first medical device determining the type of treatment equipment connected to the first medical device, generating, based on information of the type of the connected treatment equipment, a driving signal for driving the connected treatment equipment, and outputting the driving signal to the connected treatment equipment;

a first switch for switching on and off the treatment equipment connected to the first medical device;

a second medical device to which a piece of medical equipment different from the type of the connected treatment equipment, the second medical device generating and outputting a driving signal for driving the connected piece of medical equipment based on information of the connected piece of medical equipment;

a second switch for switching on/off the medical equipment connected to the second medical device;

a first communicating unit, provided to the first medical device, capable of conveying the information of the type of the connected treatment equipment in response to activation of the first switch;

a second communicating unit, provided to the second medical device, capable of conveying the information of the connected piece of medical equipment to the first medical equipment in response to activation of the second switch, the second communicating unit being capable of receiving, from the first communicating unit, the information of the type of the connected treatment equipment; and

a decision unit, connected to the second communicating unit, for making, in response to activation of the first switch, based on the information, conveyed from the first communicating unit to the second communicating unit, of the type of the connected treatment equipment, permission/non-permission determination regarding whether or not the piece of medical equipment to which the second medical device is connected can operate in synchronization.

14. (New) A surgery system comprising:

a first medical device to which a type of treatment equipment selected from a plurality of types of treatment equipment is connected, the first medical device determining the type of treatment equipment connected to the first medical device, generating, based on information of the type of the connected treatment equipment, a driving signal for driving the connected treatment equipment, and outputting the driving signal to the connected treatment equipment;

a first switch for switching on and off the treatment equipment connected to the first medical device;

a second medical device to which a piece of medical equipment different from the type of the connected treatment equipment, the second medical device generating and outputting a driving signal for driving the connected piece of medical equipment based on information of the connected piece of medical equipment;

a second switch for switching on/off the medical equipment connected to the second medical device;

a first communicating unit, provided to the first medical device, capable of conveying the information of the type of the connected treatment equipment in response to activation of the first switch;

a second communicating unit, provided to the second medical device, capable of conveying the information of the connected piece of medical equipment to the first medical equipment in response to activation of the second switch, the second communicating unit being capable of receiving, from the first communicating unit, the information of the type of the connected treatment equipment, the first communicating unit being capable of receiving the information of the connected piece of medical equipment from the second communicating unit;

a first decision unit, connected to the first communicating unit, for making, in response to activation of the second switch, based on the information of the connected piece of medical equipment conveyed from the second communicating unit to the first communicating unit, permission/non-permission determination regarding whether or not the piece of medical equipment to which the first medical device is connected can operate in synchronization; and

a second decision unit, connected to the second communicating unit, for making it, in response to activation of the first switch, based on the information, conveyed from the first communicating unit to the second communicating unit, of the type of the connected treatment equipment, permission/non-permission determination regarding whether or not the piece of medical equipment to which the second medical device is connected can operate in synchronization.

15. (New) A surgery system according to Claim 13, wherein the piece of medical equipment connected to the second medical device is selected from among a type of treatment equipment different from the type of treatment equipment connected to the first medical device, a water-supply/suction device, and a pneumoperitoneum device.

16. (New) A surgery system according to Claim 14, wherein the piece of medical equipment connected to the second medical device is selected from among a type of treatment equipment different from the type of treatment equipment connected to the first medical device, a water-supply/section device, and a pneumoperitoneum device.

17. (New) A surgery system according to Claim 13, wherein the first medical device comprises:

a driving control information transmission unit for generating driving control information responsive to the type of treatment equipment connected to the first medical device, and transmitting the driving control information to the other medical devices through the first communicating unit;

a control information determination reply unit for receiving driving control information transmitted from the other medical devices, making permission/non-permission

determination, based on the received driving control information, regarding whether or not the first medical device can operate in synchronization with the other medical devices, and making reply of the permission/non-permission determination to the originating medical device through the first communicating unit; and

a driving control decision unit for deciding driving control of the first medical device based on synchronization driving permission/non-permission determination reply from a control information determination reply unit of another medical device.

18. (New) A surgery system according to Claim 14, wherein the first medical device comprises:

a driving control information transmission unit for generating driving control information responsive to the type of treatment equipment connected to the first medical device, and transmitting the driving control information to the other medical devices through the first communicating unit;

a control information determination reply unit for receiving driving control information transmitted from the other medical devices, making permission/non-permission determination, based on the received driving control information, regarding whether or not the first medical device can operate in synchronization with the other medical devices, and making reply of the permission/non-permission determination to the originating medical device through the first communicating unit; and

a driving control decision unit for deciding driving control of the first medical device based on synchronization driving permission/non-permission determination reply from a control information determination reply unit of another medical device.

19. (New) A surgery system according to Claim 13, further comprising a third medical device, wherein the three medical devices communicate with one another.

20. (New) A surgery system according to Claim 14, further comprising a third medical device, wherein the three medical devices communicate with one another.